

**REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed November 10, 2003. The Office Action rejects all of the presently pending Claims 7-13, 20-23 and 34-37. Applicants respectfully disagree with the rejections, and request reconsideration and favorable action in this case.

**Rejections Under 35 U.S.C. § 103**

Claims 7-9, 11, 20, 22, 23, and 34-37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,037,732 issued to Alfano et al. ("*Alfano*") in view of U.S. Patent No. 4,817,865 issued to Wray ("*Wray*"). Applicants respectfully traverse these rejections for the reasons stated below.

For the Examiner to establish a *prima facie* case of obviousness, the Examiner must show that the prior art reference (or references when combined) teaches or suggests all the claim limitations. M.P.E.P. §2143. The Office Action fails to meet this criteria, and the claim rejections should be withdrawn.

Claim 7 is allowable because the combination of *Alfano* and *Wray* does not teach or suggest "transmitting a third request to a plurality of server chassis cooling fans to increase the speed of the server chassis cooling fans if the first operating temperature is greater than or equal to the first predetermined maximum operating temperature or the second operating temperature is greater than or equal to the second predetermined maximum operating temperature . . . ," [emphasis added] as recited by Claim 7. The Office Action fails to assert that this limitation is shown by the proposed combination. Rather, the Office Action asserts only that *Alfano* shows an initiation of a cooling process ". . . if the operating temperature is greater than or equal to a predetermined maximum operating temperature" [emphasis added]. This does not constitute an assertion that the cited reference shows increasing the speed of the fans based on a comparison of multiple operating temperature readings to their respective predetermined maximum operating temperatures. In fact, neither *Alfano* nor *Wray* teaches or suggests using multiple temperature standards in determining whether to initiate a cooling process.

Further, while the Office Action does not specifically concede that increasing the speed of more than one fan based on a particular temperature criteria is not shown by *Alfano*, the Office Action nevertheless identifies *Wray* as a secondary reference allegedly showing this limitation. In particular, the Office Action states that *Wray* shows "a ventilation

system . . . where the speed of the fans in all 'compartments' is increased if the temperature in any of the compartments is over a predetermined threshold." [emphasis added] (See Office Action, page 4, paragraph 6). This is an incorrect characterization of *Wray*. A careful reading of *Wray* in fact reveals that the entire system of *Wray* uses only one fan. (See figure 1, reference number 8). Thus, while *Alfano* mentions using multiple fans in a computer cooling system and *Wray* shows activating one fan if any of the multiple temperature readings reaches a particular level, the proposed combination of *Alfano* and *Wray* still does not constitute a disclosure of "transmitting a third request to a plurality of server chassis cooling fans to increase the speed . . . ." [emphasis added]. Furthermore, as described above, the proposed combination does not teach or suggest increasing the speed of multiple fans based on a comparison of multiple operating temperature readings to their respective predetermined maximum operating temperatures. For at least these reasons Claim 7 is allowable.

Claim 7 is allowable also because neither *Alfano* nor *Wray* teaches or suggests "wherein the first and second server processing cards and the plurality of server chassis cooling fans are disposed at least partially within a server chassis," as recited by Claim 7. Without providing any evidentiary support, the Office Action makes a bare assertion that "all computer fans and fan control system are well known to be placed inside the casing of the computer or server system." (Page 4, paragraph 8 – Office Action). However, M.P.E.P. §2144.03(a) specifically states that "[i]t is never appropriate to rely solely on 'common knowledge' in the art without evidentiary support in the record, as the principal evidence upon which a rejection is based." [emphasis added]. Thus, without evidentiary support, the Office Action's assertion that this missing limitation is well known is not a proper basis for an obviousness rejection of Claim 7. If the Examiner continues to maintain his rejection based on his assertion that this limitation is well known, then Applicants respectfully request that the Examiner provide a reference supporting this assertion, or produce an affidavit or declaration setting forth specific factual statements and explanation to support this finding. (See M.P.E.P. § 2144.03(c) and 37 C.F.R. § 1.104(d)(2)). Further, even if the Examiner's allegation were correct, it still does not specifically assert that a plurality of server chassis cooling fans are disposed at least partially within a server chassis.

Claim 7 is allowable also because the proposed combination of the cited references does not teach or suggest "transmitting first and second requests to first and second server processing cards, respectively, to read first and second operating temperatures, respectively . .

,” as recited by Claim 7. While both *Alfano* and *Wray* may suggest passively receiving temperature measurements, none of the cited references teach transmitting any request to read operating temperatures. Further, Claim 7 is allowable because the proposed combination does not teach or suggest “. . . the first and second temperature sensors being coupled with the first and second server processing cards, respectively,” as recited by Claim 7. Reconsideration and favorable action are requested.

Claim 20, which as been amended to include the limitation of its dependent Claim 21, is allowable because the combination of *Alfano*, *Wray*, and U.S. Patent No. 6,101,459 issued to Tavallaei et al. (“*Tavallaei*”) does not teach or suggest “wherein the plurality of server processing cards comprises a first number of server processing cards and the plurality of cooling fans comprises a second number of cooling fans and wherein the first number [of the server processing cards] is **greater than** the second number [of the plurality of cooling fans],” [emphasis added] as recited by Claim 20. The Office Action addressed this missing limitation in its rejection of Claim 21. In rejecting Claim 21, the Examiner concedes that *Alfano* does not show a system where the plurality of server processing cards outnumbers the plurality of cooling fans, but argues that this missing limitation is shown by *Tavallaei* because *Tavallaei* shows “. . . a system of fan based cooling and control where a fan control card is used in a PCI slot containing 4 fan output modes (Figure 1.).” The Examiner further states that “[t]his is done for purposes of expansion and would allow the users to simply **add fans** at a later point should they become needed.” (See Office Action, page 7, paragraph 24). As the Examiner suggests, the teachings of *Tavallaei* may be used to increase the number of fans in a system by using hot-pluggable fans. As such, under the proposed modification, the teachings of *Tavallaei* would **increase the number of fans, not the server processing cards**, and thus does not show the number of server processing cards eventually **outnumbering** the plurality of fans. Because the teachings of *Tavallaei* is opposite from the missing limitation, the missing limitation is not shown and Claim 20 is allowable. Reconsideration and favorable action are requested.

Independent Claims 22, 34, and 36 are allowable for reasons analogous to those provided in conjunction with Claim 7. More specifically, Claim 36 is allowable because the cited references do not teach or suggest “increasing the operating speed of cooling fans associated with the server chassis if any one of plurality of server processing cards' operating temperature exceeds one of a plurality of predetermined maximum temperatures . . . ,” as recited by Claim 36. Reconsideration and favorable action are requested.

As depending from their respective allowable independent claims, dependent Claims 8-13, 21, 23, 35, and 37 are allowable. Claim 8 is allowable also because the cited references do not teach or suggest "comparing the third operating temperature with a third predetermined maximum operating temperature . . .," as recited by Claim 8. As stated above in conjunction with Claim 7, neither *Alfano* nor *Wray* discloses using more than one temperature threshold to compare a measured temperature. Further, the assertion in the Office Action that "it is well known in the art there be able to add as many server processing cards as required and Claim 8 brings in no new material other than number of cards and fans" is inadequate to establish a *prima facie* case of obviousness. As stated in § 2144.03(a) of the M.P.E.P., it is never appropriate to rely on common knowledge in the art without evidentiary support in the record, as the principal evidence upon which a rejection is based. If the Examiner continues to rely on this reason to reject Claim 8, Applicants respectfully request that the Examiner produce a reference in support of his assertion, or provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. (See §2144.03(c) - M.P.E.P.).

Claim 9 is allowable also because neither *Alfano* nor *Wray* teaches or suggests "wherein at least two of the first, second, and third predetermined maximum operating temperatures are equal," as recited by Claim 9. In rejecting Claim 9, the Office Action states only that "a skilled artisan would have found it an obvious variation to set all of the maximum temperatures to be equal." [emphasis added] (See Page 5, paragraph 12 – Office Action). As described above, the M.P.E.P. specifically states that such an assertion, without any evidentiary support, is never appropriate to support an obviousness rejection. Thus, Claim 9 is allowable. Claim 37 is allowable for reasons analogous to those provided in conjunction with Claim 9. If the Examiner continues to rely on this argument to reject Claims 9 and 37, Applicants respectfully request that the Examiner produce a reference to support his assertion, or provide an affidavit or declaration setting forth specific factual statements and explanation to support this finding. Reconsideration and favorable action are requested.

The rejection of Claims 10 and 12 under 35 U.S.C. §103(a) as being unpatentable over *Alfano* in view of *Wray* and further in view of U.S. Patent No. 6,470,289 issued to ("*Peters*") is considered moot because Claims 10 and 12 depend from allowable independent Claim 7. Claim 10 is allowable also because none of the cited references teach or suggest “. . . wherein the first request is transmitted over a PCI bus,” as recited by Claim 10. The Office

Action identifies column 7, lines 27-30 of *Peters* as showing this limitation. However, this is incorrect because the identified portion in fact describes how a PCI card may get hot and radiate heat to a CPU, and mentions nothing about transmitting a request to read temperature over a PCI bus. Further, the mere showing of a PCI card, without more, does not constitute an inherent showing of transmitting a request over a PCI bus. Claim 12 is allowable for analogous reasons. If the Examiner continues to rely on this argument to reject Claims 10 and 12, Applicants respectfully request that the Examiner produce a reference to support his assertion, or provide an affidavit or declaration setting forth specific factual statements and explanation to support this finding.

The rejection of Claim 13 under 35 U.S.C. §103(a) as being unpatentable in view of *Alfano* and *Wray* and further in view of U.S. Patent No. 6,065,081 issued to Stancil et al. ("*Stancil*") is considered moot because Claim 13 depends from allowable independent Claim 7. Reconsideration and favorable action are requested.

#### New Claims

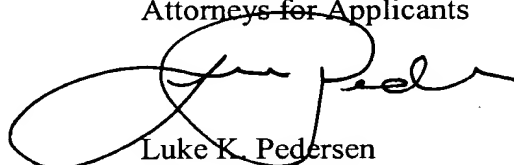
New Claims 38 and 39 are presented. Claim 38 is allowable over the cited references because they do not teach or suggest "transmitting first, second, and third requests to first, second, and third of at least ten server processing cards, respectively, to read first, second, and third operating temperatures, respectively, . . . wherein . . . at least one of the first, second, and third requests is transmitted over a PCI bus." The cited references also do not show "receiving, in response to transmitting the requests, the first, second, and third operating temperatures over a midplane circuit board at a central processing unit." The cited references also do not show "transmitting a fourth request to **all of at least three server chassis cooling fans** to increase the speed of the server chassis cooling fans if the first operating temperature is greater than or equal to the first predetermined maximum operating temperature, the second operating temperature is greater than or equal to the second predetermined maximum operating temperature, or the third operating temperature is greater than or equal to the third predetermined maximum operating temperature." [emphasis added]. Claim 39 is allowable over the cited references because none of them teach or suggest "adjusting at least two of the first, second, and third predetermined maximum operating temperatures to an equal value." Favorable action is requested.

CONCLUSION

In addition, if a petition for an extension of time under 37 CFR 1.136(a) is necessary to maintain the pendency of this case and is not otherwise requested in this case, Applicants request that the Commissioner consider this paper to be a request for an appropriate extension of time and hereby authorize the Commissioner to charge the fee as set forth in 37 CFR 1.17(a) corresponding to the needed extension of time to Deposit Account No. 02-0384 of Baker Botts L.L.P.

If there are matters that can be discussed by telephone to further the prosecution of this application, Applicants respectfully request that the Examiner call its attorney at the number listed below.

Respectfully submitted,  
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